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Using Action Learning Sets To Support Students Managing Transition Into The Clinical Learning Environment In A Uk Medical School

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Key words. Action learning, clinical transitions, medical education reflective practice.

Abstract:

This paper reports on a Curriculum Innovation Project to empower third-year Undergraduate Medical students to recognise learning opportunities in their clinical placements and to proactively use them to develop their understanding and practice. The project created action learning sets (ALS) in response to the challenges students face when trying to engage in work-based learning. In particular, how changes to clinical working patterns affect student learning, principally their participation within clinical teams.

Learning sets were conducted in two teaching hospitals, involving twenty year, three medical students over a ten week period. The students met for one and a half to two hours each week and between meetings engaged in agreed activities and reflections. The project was independently evaluated using student interviews triangulated with facilitators systematic reflections on the sessions and student written reflections.

Action Learning Sets (ALS) were found to provide a valuable and atypical approach to support students through the transition from Academic to Clinical learning settings and lay the foundations for a lifelong learning practice. This included supporting students to ask effective questions, develop participation in practice, present and identify themselves as emergent professionals, reflect upon and manage critical incidents and engage in both self-directed and collaborative learning.

Introduction and Context:

Traditional forms of Medical Education have been based upon apprenticeship models of learning; which assume that students are placed within stable healthcare organisations. In particular, they assume that students will be assigned to a group of clinicians working in a team, whose membership is consistent; that the students will become known within the team and have access to meaningful clinical experiences. (Dorna: 2005). Apprenticeship models have been reconsidered, as hospitals have become different places in which to work and learn (MMC: 2008; Tooke: 2008, McKee: 2007; Morris: 2012) and are continually changing. The European Directive first applied to junior doctors on August 1 2004, (*European Working Time Directive: 2004*). It reduced the number of hours junior doctors work eroding opportunities to use time to follow whole episodes of patient care in hospital contexts. Additionally, on-going organisational restructuring within the National Health Service (NHS)

has reshaped the contexts and conditions within which care is provided with implications for both practice and learning. (McKee and Eraut: 2012). For example, today team membership can change from day to day and doctors may work across different hospital sites. In larger teaching hospitals, it can be difficult for students to become 'known' within these fluid teams.

Evidence from quality assurance visits to hospitals in which our medical students are based and feedback from clinical teachers identifies an escalating tension between providing clinical service and teaching. Time to teach is under pressure as doctors are more valued for meeting service performance targets than educational ones. In some hospitals teaching does not form a part of clinical work-plans, in others there is little allocated time to teach. This has implications for medical student's access to learning and teaching in the clinical environment. medical students at King's College London have reported 'feeling in the way'; 'being invisible', and unsure of their role. These issues are particularly acute in year 3, when students face a transition from the academic learning environment to the clinical learning environment.

The medical school in which this pilot is based is one of the oldest in the U.K. with a traditional curriculum of pre-clinical classroom based learning in years 1 and 2 and predominantly clinic based learning in years 3, 4 and 5. External reviews from the General Medical Council (GMC: 2012-13), the National Student Survey (*taken by all students in their final year of an Undergraduate degree- NSS 2012 - 2015*), and feedback from student focus groups, suggest that our students experience three key challenges in the transition from classroom to work-based learning. These are a sense of isolation, not being 'taught', and not receiving timely purposeful feedback. Induction to learning in the clinical setting does not really address these challenges. Students are provided with a lot of information about operating in the clinical environment but not supported to develop the tools to learn effectively in it. For example, they are told to reflect and shown a variety of models of reflection, but do not feel they are sufficiently actively engaged and supported in developing their own reflective approaches and practices.

This project set out to empower students in their clinical context to engage more effectively in work-based learning, to support their developing understanding of this 'new' learning environment, and identify the learning opportunities they have access too. Action Learning Sets (ALS), were chosen as an appropriate strategy to achieve this within curriculum constraints.

The Precise Nature of the Problem?

The quality assurance data described above served to highlight the particular challenges our undergraduate student's experience. Within medical education literature, the complexity of transitions is examined on a number of levels. There is an emphasis upon developing understanding of the emotional, social and other factors influencing student learning (Teunissen, PW and Westerman, M (2011). O'Brien et al: et al: (2007). Building on these studies, greater emphasis has been placed upon extending the focus upon transitions to transitions within clinical learning environments arguing that these are also disruptive. The authors identify a broad range of factors influencing learning during transitions and have given greater attention to understanding the influence of organisational cultures on learning and learning environments by deploying organisational socialisation theory (Atherley et al: 2016).

Some common challenges faced by medical students in all forms of transition have emerged. These include issues relating to: what the students role is and their clarity about it; the burden imposed by their workload; students ability to proactively seek learning opportunities and take advantage of those that arise; and how students navigate and negotiate team relationships and member roles (*Prince et al: 2005*).

A key enduring challenge appears to be their precise role on a busy ward and in a busy clinic wondering how they can legitimately engage. This issue of legitimate peripheral participation has been explored by Wenger looking at communities of practice (*Wenger: 1998*) and applied to medical students developing their professional identity and practice (*Hilton and Slotnick: 2005, Mann: 2011*). For students this presents a central conundrum when for the first time they are fully immersed in a clinical context, attempting to both learn and contribute.

At this point students have to be prepared to seize learning opportunities as they arise in clinics, on wards, in operating theatres rather than being provided with carefully structured formal teaching in an academic learning environment. In the clinical setting where the priority is service delivery, students can find it difficult to decide how and when to pursue an opportunity by actively observing, listening and asking questions of busy clinicians. This process requires situational judgement (*Wenger: 1998*) which students have had little chance to develop.

In summary, students have been used to being high academic achievers and perceive that they are now without obvious value to the professional teams to which they are attached. They are unfamiliar with learning within the workplace and uncertain about how to navigate and engage within teams and cultures they have not come to understand. This can lead to feelings of powerlessness, dejection and loss of motivation.

Why Action Learning Sets?

Action learning (*Pedler and Abbott: 2013*) was adopted as the main theoretical underpinning of the project. It draws upon the classic action research cycle of problem identification, investigation in situ, reflection, and action that is adapted in this initiative to support an inquiry-based approach to learning (*See Appendix A*). It was chosen because it offered a robust structure in which to engage the medical students alongside principles of practice which enabled them to take control of their learning. Action learning is based on the relationship between reflection and action, where the focus is on the issues and problems individuals bring and planning future action with the structured attention and support of the group. Put simply, it is about solving problems and getting things done. (*Fry et al, 2008*). It has been applied in many different contexts including: the National Health Service (NHS), higher education, schooling, industry and commerce (*Pedler et al: 2005*) and involves working in small groups that meet over time to focus on challenges or issues. In the context of this medical undergraduate initiative, the challenge was to explore how best to support medical student learning in clinical contexts, which are new to them and demand different learning strategies to those used successfully in pre-clinical years.

In addition, the theoretical perspectives of ‘The Thinking Environment’ (*Kline: 2009*), ‘Learning Organisations’ (*Rushmere, Kelly et al: 2004*) and ‘Situated Learning Theory’ (*Lave and Wenger: 1991*) were used when designing the sequence of sessions and between session activities for this project. They provided a range of perspectives and approaches to

understanding the workplace as a learning environment and how to engage and adopt productive roles within it. For example, Kline describes the enabling and disabling conditions for learning. These correlate with conditions identified for learning organisations both generally and in clinical settings. In addition Wenger's notion of legitimate peripheral participation speaks to feelings of isolation and disengagement. All three perspectives identify the necessary culture required to support workplace learning and its implications for listening, observing, asking questions and participating within the setting. These were used to create an indicative syllabus and teaching resources (*Appendix B*). Indicative because the Action Learning sets would follow the particular issues and challenges identified by students.

Integrating these approaches produced a collaborative, problem solving and action orientated process which required both students active participation and them taking responsibility for their learning. This differs significantly from the traditional role of the students as passive recipients of expert knowledge (*Boud, D: 2010 Argyris, C, Schon, D: 1978 Elliott, J: 1991*). The programme was designed to provide a structure with very limited direction that enables students to identify and explore the challenges they face on a weekly basis. The action learning sets were developmental in nature and flexible to address student issues. The enquiry-based learning principles of action learning were embedded in our approach. These included the identification of learning needs; developing a situated understanding of the need in practice; designing a response to address that need; implementing and evaluating that response. Our initial focus was on creating a safe learning environment within the set by agreeing rules of engagement, providing a process for attentive listening, developing understanding of effective and disabling learning environments and identifying an issue or concern that a student or students wanted to explore.

Methods, Techniques and Modes of Inquiry:

The pilot was designed as an action research project that took place in one large and one small teaching hospital. These represented the range of teaching hospitals our medical students would be allocated too. The large teaching hospital had 98, year 3 students. The smaller teaching hospital had 42, year 3 students.

The students were invited to volunteer to join Action Learning Sets in the sample hospitals. One Action Learning Set would consist of 10 students and would meet weekly over a 10 week period (the length of their placement). The time commitment was initially estimated at about an hour each week, attending the set meetings and an hour engaged in set related activity in the workplace. In reality students choose to stay for over one and a half hours per meeting and often spent more than an hour on their work-based activities.

It was intended that a student lead facilitator and deputy lead facilitator would be recruited from each set and trained by two educationalists experienced in action research and action learning. The educationalists would attend weekly sessions to support the groups during the pilot. This original design needed to be adapted during the pilot as the students did not feel confident to lead the sessions and needed to develop a range of skills alongside familiarity with the ALS process.

Each week students identified their learning issue or challenge at the set meetings and using the action learning principles set out above, explored what they could do to progress their learning. Students in each set could invite clinical teachers and relevant others to join them in

their set to answer questions and think through how to address issues raised (*See Appendix C*). However, students valued the safe environment of the learning sets and did not have the confidence to invite others into the space in this initial pilot.

An independent consultant evaluated the pilot using qualitative data collection methods predominantly semi-structured interviews with students to capture their perspective. These were conducted on the telephone and typically lasted an hour.

Implementing AL Sets:

A set of 10 students were formed in each teaching site. Feedback from students who attended ‘taster sessions’ but who did not volunteer suggested that because there was no obvious ‘clinical teaching’ within the initiative that this was something they did not have time for. Those who did volunteer were interested in collaborative or peer learning and an opportunity to join what they called a ‘study group’. The sets met weekly, at around 5 pm.

Students came to the sets with many issues related to the challenges they had learning in a clinical environment and valued knowing that others faced similar issues to those they encountered. For example, that they were not alone in: feeling anxious about ‘fitting in’ within the clinical context, having difficulty asking questions, participating in practice, presenting themselves professionally and responding to events they experienced as being critical. Students active engagement in this learning process brought to light some key issues, which needed to be addressed to support them through their transition from formal academic to clinical learning. These issues are outlined below.

Findings:

Asking effective questions

The learning agenda was driven by students’ concerns. An initial focus was the difficulty they experienced asking questions to both enable and check their learning. Their difficulty was both framing a question, knowing who to ask and when to ask it. A lot of support was required to help students think through how and when to ask questions. Resources were drawn from educational research and organisational learning literature to help them frame questions that would open discussion and address their needs. They were also engaged in paying close attention in the clinical setting to what was happening when and how they asked their question.

For example: The question: *“What knowledge do I need to know?”* was frequently asked by students. This broad question can be difficult to answer. A foundation doctor or junior doctor has internalised a lot of knowledge and may not recognise or be able to articulate what they have learned. It is better to ask specific questions, such as, *“I need to know about blood in urine- what does that mean?”* or *“How can I spot real problems or serious trouble? Or “What alarm bells flash for you when you are worried about a patient with X?”*

Students also came to recognise the importance of communicating their existing levels of knowledge so that answers could be pitched at an appropriate level. For example.” *I have*

read about lower limb neurological examinations but what are the most common and rare conditions I might see?”

Students also recognised that they needed to develop sensitivity about when to ask a question. For example, not in the middle of an emergency or before a patient had been treated/stabilised, or when the doctor was busy on the ward with other team members. Over the weeks, the group identified the kind of moments and places that were conducive to using questions to stimulate learning conversations and shared these within the set. For example, following a doctor into his or her room or communal ward area or a quiet time during out-of-hours working (*on-call*). They were developing a sense of how things happened and worked in this environment.

Developing participation in Practice.

Students also highlighted their need to develop a sense of what legitimate peripheral participation involved. While their clinical skills did not enable them to contribute significantly to patient care, they needed to engage in order to develop those necessary skills and to learn when they might be used. The students shared strategies and ideas about how to develop and embody appropriate roles and again focussed on formulating questions to enable participation such as: *“Is there anything I can do? I need to learn to take a psychiatric history, but with the patient the consultant asked me to talk to, I could not get a word in, he just talked and talked. What do you do in a situation like that?”* They also ensured that they actively learned skills which made them useful. For example, taking bloods.

Presenting themselves as emergent professionals.

Underpinning their lack of familiarity with the clinical environment and lack of confidence was the need to present themselves as ‘becoming doctors’ and to develop a sense of identity as an emergent professional. The Sets provided a space to explore this through examining their ‘critical incidents’. These were incidents, which they felt troubled about, or were important to them. A common concern focused upon how they felt they appeared to others. For example, nervous asking questions, awkward when talking to patients. A young actor joined the Set to talk about presentation of self. The group asked to work with him and they explored and practised presentation of self; developing awareness of body language, the use of voice and breathing. These were among the most popular sessions.

Students are expected to act professionally in the clinical environment but seemed unsure about what this meant in practice. They valued the actors’ advice and rehearsals about how to present themselves professionally but there was another learning need associated with their discomfort. Though, they had some formal teaching about professionalism they had little experience in practice of its dimensions, the attributes and persona they needed to embody, and this led to limited understanding and application of the concept.

For example, some students became aware that their predominant focus on getting the clinical skills itemised in their log books ‘signed off’ as successfully completed was shaping their view of patients. Patients had become ‘interesting cases’ and opportunities for securing a sign off. This awareness was a response to their experience of patient care. For one student, knowing that a dying patient had no one to sit with her, that she would die alone, triggered the insight that becoming a doctor involved more than a focus on securing sign offs and developing skills. For another it was going to the aid of a patient who collapsed and

realising that all he could do was hold her hand and this seemed important to her. Exploring these incidents provided an opportunity to reflect upon the experience of the patient as a person and the human values dimensions of care. Students were beginning to think about what kind of doctor they wanted to be. They were beginning to think about their professional identity.

Reflection and Managing Critical Incidents.

One student described increasing difficulty with asking questions. She said:

‘I was really (failing) on the wards. I couldn’t ask questions. I was beginning to think that medicine was not for me. (Since I had the lessons with the actor) I am heard on the ward, asking questions and doing really well. (ALS) have helped to keep me in medicine.’ (Year 3 student- female.)

Students also said that the work that they did in the group helped them to reflect. One said:

“We get lectures on reflection and are told how to reflect. You (the facilitators) show us how to do it”.

Within the sets, the kinds of conversations the students were having were shifting. For example, when two junior doctors joined the Set to talk with students their conversations began with students asking advice about Objective Structured Clinical Examination (OSCE) assessments but widened to relate real practice to this form of performance assessment. The junior doctors described the importance of having ‘a system’ for history taking, clinical examination and differential diagnosis which moved the conversation into developing ‘real’ practice.

The volunteer students said they would continue with ALS if that were possible and thought they should be available for medical students.

The external evaluation identified an apparent gender difference between how females and males benefited from participation in the Sets. Females tended to talk about how the Set enabled them to collaboratively develop solutions to issues and challenges. Males tended to talk about how it was useful to listen to other people’s challenges and that helped them to develop their own solutions.

Both the external and internal evaluation of ‘Action Learning Sets’ identified learning skills that students would have benefited from developing before joining a Set. They include knowing how and when to ask questions; knowing how to observe clinical practice (being clear about what to look for and what to be aware of). Experience of critical incident analysis; engaging in reflection-on-their experience, thinking about what kind of doctor they want to be and understanding the range of health practitioners who can support their learning in hospitals. However these abilities and strategies involve some knowledge of the clinical environment and how it is organised which students do not fully understand before their clinical placements.

Discussion.

Changes in the clinical environment have changed it as a learning environment where time to teach is under pressure and the established firm structure has given way to clinical teams whose membership can change from day to day. This has made it difficult for students to feel

they are part of a clinical team and to recognise and know how to engage in learning opportunities. The pilot showed that ALS's address the challenges of isolation, uncertainty about how to engage in work based learning and sense of having a legitimate role by providing a supportive and collaborative learning group. Within the group students can identify and respond to the challenges arising from the fluid and complex context of hospitals which they have to negotiate and manage. For these year 3 students, this took the form of examining the challenges they were experiencing and identifying the key skills they needed to productively engage in work based learning. These key skills include asking effective questions, developing participation in practice, presenting themselves as emergent professionals/doctors, reflecting upon and managing their critical incidents. They are crucial planks to becoming a doctor and have career long relevance.

Located in the workplace, sets focus upon the experiences of medical students and the process of supporting learning from their experience on a weekly basis. This regular contact was important to the success of the process. Students valued the opportunity to voice, examine and reflect upon their own issues and concerns. The pilot identified that students enter their first clinical year without the abilities and strategies to engage in work based learning. This adds urgency to supporting that learning during the early stages of their clinical training.

While better preparation to engage in work based learning is needed, support is also likely to be needed while in the clinical setting, particularly in the early years. During this time students grapple with the development of knowledge, skills and practice in environments where service needs erode time and space to learn. Creating time and space to learn is becoming a priority. ALS offer a process and structure to achieve this in ways that enable students to grow more easily and actively into their role as doctor.

The pilot has some limitations. It involved a small, self-selected sample of student volunteers over a short period of time. The learning from the pilot focused upon how to prepare students to engage within the Set and the workplace. A larger and longer study could explore how ALS's might support learning over a year or more in clinical settings and develop better understanding of how the organisational cultures within different clinical settings influence learning.

As hospitals continue to change as places in which to work and learn, it will become even more necessary to help students understand how to engage and learn within this fluid environment.

Practice points.

- Key work-based learning skills for year 3 medical students include: asking effective questions, developing participation in practice, presenting themselves as emergent professionals, reflecting on and managing their critical incidents.
- Elements of the ALS approach have informed teaching in medical education and self-constructed Student Selected Component (SSC's) with an emphasis on observational skills, formulating questions, identifying the elements of a 'good' and 'not good' learning environments and thinking about clinical settings as learning environments.

- Exercises to engage in reflection from experience have also been used. These have involved a ten-minute writing exercise about an incident within a clinical setting that made students think about what being a good doctor means. This was followed by group discussion and opportunities to develop a fuller reflective account.
- A funded extension of this pilot is in the planning process.

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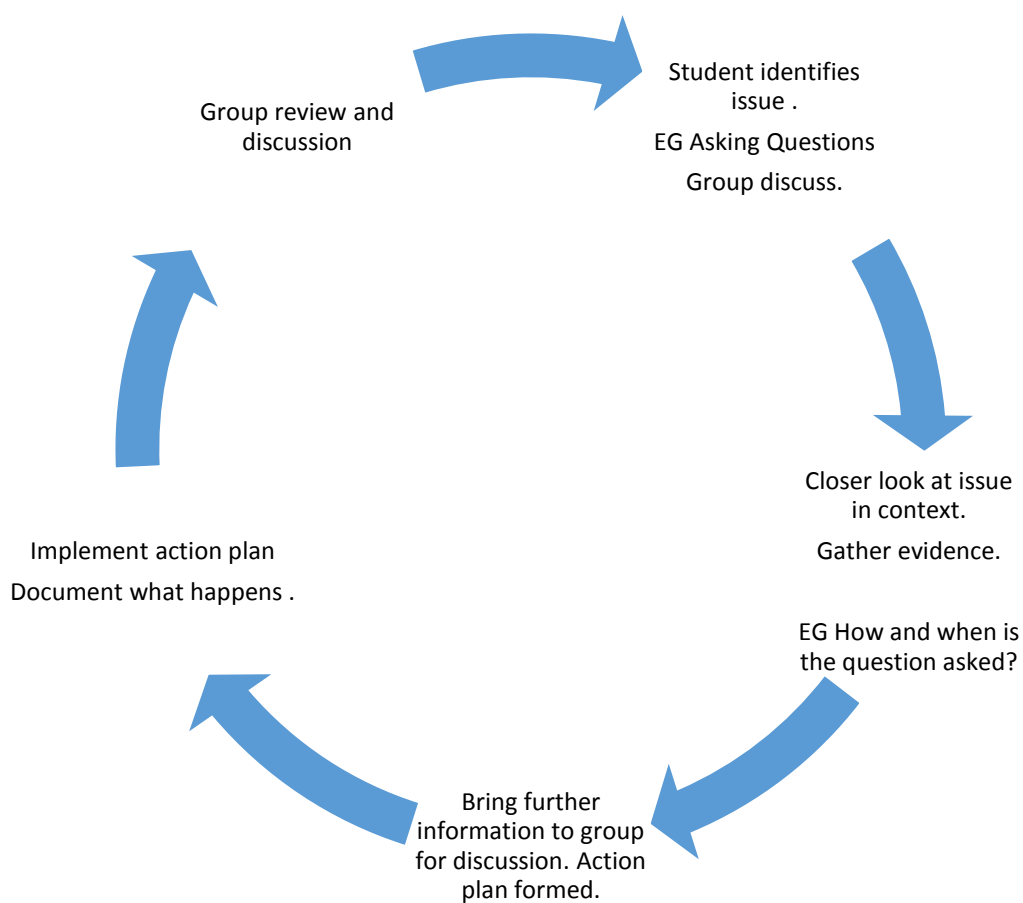
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Appendix A: The Process of an Action Learning Set.



Appendix B: Indicative Activities.

1. Working in an Action Learning Set: rules of engagement
2. Conditions for thinking: what makes a good learning environment and what makes a bad learning environment?
3. Listening in Pairs.
4. Asking questions in a clinical environment: when to ask, framing the question, who to ask
5. Receiving and using feedback: listening and acting
6. Identifying your learning needs

7. Observing in the clinical environment
8. Reflecting on experience
9. Supporting individual and group learning self-directed and collaborative learning
10. Neutral chairing: leading group learning

Appendix C: The Structure and Process of an Action Learning Set.

